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Response by official statistics to the Sustainable Development Goals

Bridging the gap: Integrating the measurement of Sustainable Development Goals with existing statistical frameworks

Note by the Statistics Netherlands

Summary

The paper focuses on the importance of having a framework for the measurement of Sustainable Development Goals to ensure a broader view on sustainable development. If only relying on what policy makers consider as important, the risk of underrepresenting some relevant areas would be high. The paper will also discuss the importance of measuring social capital and the necessity to establish a link with the System of National Accounts and the System of Environmental-Economic Accounting.

The paper is presented for discussion to the first session of the Conference of European Statisticians' seminar "Response by official statistics to the Sustainable Development Goals".

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I. Introduction

1. During the last decades the number of measurement systems in the field of sustainable development has increased considerably. The Rio+20 Conference has resulted in a new momentum, as the ambition has been formulated in the Post-2015 Development Agenda to arrive at global Sustainable Development Goals (SDGs), which should replace the Millennium Development Goals (MDG). One of the lessons learnt from the MDG experience is that due attention should be paid to the measurability of the goals and targets. At the moment a tentative list of SDGs and targets has been compiled as an outcome of a political process that was carried out through the Open Working Group on Sustainable Development Goals (OWG). These targets are linked to a long list of proposed indicators. The statistical community is now confronted with the task to integrate the more than 300 separate indicators into one, comprehensive framework.

2. As there are already numerous ways to measure sustainable development, the question is whether we need more or less measurement systems. When considering the success of the System of National Accounts (SNA), one of its key factors of success is that at an early stage there was convergence toward one statistical standard which was adopted by a large number of countries. The Post-2015 Agenda offers a similar possibility to foster a further convergence of measurement methods for sustainable development.

3. In the light of the limited amount of time and capacity in terms of resources that the statistical community has at its disposal, a pragmatic approach is needed to arrive at a consistent and manageable framework for measuring sustainable development. Instead of reinventing the wheel, it makes more sense to align different measurement initiatives that have proven to be successful. This paper argues that an alignment of the proposed SDG indicators, with the frameworks as put forward in the *Conference of European Statisticians (CES) Recommendations for Measuring Sustainable Development*[1] and in the *System of Economic and Environmental Accounting (SEEA)*[2] is such a pragmatic and sound way to arrive at a new SDG indicator system to monitor the goals and targets as formulated in the Post-2015 Agenda.

4. The CES Recommendations are the outcome of the UNECE/Eurostat/OECD Task Force for Measuring Sustainable Development. The Recommendations which have now been endorsed by about 65 countries, proposes a flexible framework and an indicator system consisting of 90 indicators for 20 themes of sustainable development. Special attention is paid to the quality of life or human well-being "here and now", "later" (focusing on the amount of assets left for future generations) and "elsewhere" (the pressure that the generation of well-being in one country puts on the rest of the world).

II. Mapping Sustainable Development Goals indicators with the Conference of European Statisticians' framework

5. In this paper the proposed SDG indicators have been compared with the outcome of the CES Recommendations. The SDG indicators used in this paper are

[1] See: http://www.unece.org/publications/ces_sust_development.html
[2] See: http://unstats.un.org/unsd/envaccounting/seea.asp

derived from the assessment of proposed preliminary indicators for the Post-2015 Development Agenda, as presented by the United Nations Statistics Division for consultation with national statistical offices in February 2015.

6. Table 1 presents the small set of indicators as presented in the CES Recommendations and gives information about the number of countries for which internationally comparable data are available. Besides, a possible link with the MDG indicators is provided (the numbers of MDG indicators are provided in

http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm).

Table 1

Small set of indicators presented in the CES Recommendations: global coverage and the link to MDG indicators[3]

Theme	*Indicator from CES Recommendations*	*Alternative indicator worldwide*	*Worldwide availability (no. of countries and areas)*	*Source*	*Relevant MDG indicators*
TH1. Subjective well-being	Life satisfaction		135	World Happiness Database	
TH2. Consumption and income	Final consumption expenditure		210	United Nations	1.4
	Official Development Assistance (ODA) paid	Official Development Assistance (ODA) received	143	World Bank	8.1-8.5; 8.9
	Income inequality	Share of poorest quintile in national consumption	134	United Nations (MDG database)	1.1; 1.2; 1.3; 1.6
	Gender pay gap		68	United Nations	3.1-3.3
TH3. Nutrition	Obesity prevalence	Malnutrition prevalence	160	United Nations	1.8; 1.9
TH4. Health	Life expectancy at birth		185	United Nations	4.1- 4.3; 5.1-5.6; 6.1-6.10; 7.9
TH5. Labour	Employment rate		145	United Nations	1.5; 1.7
TH6. Education	Educational attainment		184	United Nations	2.1-2.3
TH7. Housing	Living without housing deprivation	Urban population in slums	91	United Nations (MDG Database)	7.10
TH8. Leisure	Leisure time		20	Multinational Time Use Survey Database	
TH9. Physical Safety	Death by assault/ homicide rate		186	United Nations	

[3] http://www.unece.org/publications/ces_sust_development.html, Table 5, p. xxviii

TH10. Land and ecosystems	Bird index	Bird species threatened	214	World Bank (WDI)	7.1; 7.6, 7.7
TH11. Water	Water abstractions		93	United Nations	7.4-7.6; 7.8
TH12. Air quality	Urban exposure to particulate matter		173	United Nations	
TH13. Climate	GHG-emissions	CO_2 emission	229	World Bank	7.2; 7.3
TH14. Energy resources	Energy consumption		187	United Nations	
TH15. Non-energy resources	Domestic material consumption		200	Sustainable Europe Research Institute	
TH16. Trust	Generalised trust	Public sector management (University of Calgary, Canada, Centre for Public Interest Accounting	82	World Bank (World Development Indicators	
TH17. Institutions	Voter turnout		194	International Institute for Democracy and Electoral Assistance	
TH18. Physical capital	Gross capital formation		156	United Nations	
TH19. Knowledge capital	R&D expenditures		116	United Nations	
TH20. Financial capital	Consolidated government debt		84	World Bank (World Development Indicators)	8.10

7. The table shows that the core indicators as selected in the CES Recommendations are available for a relatively large number of countries, and that for many of the themes a direct link can be made with the proposed MDG indicator set.

8. Furthermore, an analysis was made in order to find out to what extent the proposed list of SDG indicators can be linked with the CES framework. This overview also helps us to identify possible gaps in the SDG indicator list, but it also enables us to identify themes that have been ignored by the CES recommendations, but which are considered to be important considering the Post-2015 Agenda and should therefore be included in the framework.

9. This exercise shows that of the total of 309 proposed SDG indicators, only 11 (4 per cent of the total of number of indicators), could not fit into the CES framework. This is because sometimes a proposed indicator in fact includes different measures (see indicator 1.3-1), or that the indicators are not yet defined, but presented as placeholders (meaning that it is indicated in very general terms what

kind of measure is needed, without presenting a specific indicator, see the four indicators under goal 3). In other cases the CES framework needs to be expanded, in order to fit in these indicators. This analysis also indicates that new themes on human rights (with specific attention to women's rights), transport, mobility and population (to address all kinds of demographic issues) are needed.

10. One of the main problems statisticians face with the list of proposed SDG indicators is its mere size. It remains to be seen how many of these indicators are actually available or will be available in the near future, or will be available in such a way that they allow a proper international comparison. In fact some preliminary research into data availability by the United Nations Statistics Division shows quite disappointing results. Often it is argued that making a selection out of this list requires political choices, which the statistical community does not consider to be its task. We advocate a more pragmatic approach for statisticians, by making a distinction between core indicators and other indicators for the SDG indicator list as was done in the CES Recommendations. In this respect, the core indicators measure the essence of the well-being theme in question, whereas the other (policy oriented) indicators provide more detailed information on how the core indicators could be influenced by policies (See CES Recommendations, page 67).

11. First of all, this exercise showed that the number of core indicators in the long list of SDG indicators is actually quite limited. Only 30 out of the total of 309 qualify as what the CES framework considers to be core indicators. The SDG core indicators can especially be found in the field of consumption and income (Theme 2 in the CES Recommendations), education (Theme 6), land and ecosystems (Theme 10) and institutions (Theme 17). However, for a number of themes as distinguished by the CES, no core indicators were proposed in the list of SDG indicators. In other words, many of the SDG indicators may give us information on how certain themes of well-being and sustainable development can be influenced, but actual core indicators about the state of sustainable development in countries are underrepresented. This exercise clearly shows that the proposed SDG indicators do not describe all sustainable development themes, especially not at the level of core indicators.

12. The remainder of this section compares, for each of the 20 themes from the CES Recommendations, the proposed SDG indicators (as long as they can be considered core indicators), with the core indicators as proposed by the CES.[4] This exercise is important as the data availability for core indicators is better than for the other indicators. Moreover, there is more political consensus in the field of core indicators, which implies that this set can be also implemented more easily (and rapidly) by national statisticians. Besides, it helps the international comparability and the further global convergence of sustainable development measurement systems.

A. Theme 1. Subjective well-being

SDG: Gross national happiness (Target 17.19, indicator 2)

CES: Life satisfaction (135 countries)

[4] For each theme the proposed SDG indicators are listed, with the number of the proposed indicator in brackets. For the indicators which are included in the CES framework, the number of countries for which data are available is provided in brackets.

13. Subjective well-being can be measured in terms of gross national happiness as well as life satisfaction. The data on life satisfaction are available for 135 countries.

B. Theme 2. Consumption and income

SDG: proportion of population below 1.25 dollars (expressed in purchasing power parities, PPP) per day (Target 1.1 – indicator 1); Multi-dimensional Poverty Index (1.2-1); Proportion of population below national poverty line (1.2-2); Gross domestic product (GDP) per capita (PPP) (8.1-1), income inequality (Gini or Palma ratio) (10.1-1), change in real disposable income and consumption by quintiles over time (10.1-2).

CES: Final consumption expenditure (210), Official Development Assistance (ODA) (143), income inequality (134), gender pay gap (68).

14. The proportion of people living in poverty as defined in the SDG list is an important aspect of material well-being. However, in the light of the recommendations done by Stiglitz et al., GDP per capita should be replaced by final consumption expenditure, which is available for 210 countries and areas. Besides, CES also includes data on ODA in this theme, as well as data on distribution, with special reference to the gender pay gap (which in the SDG list is defined as a separate goal).

C. Theme 3. Nutrition

SDG: prevalence of undernourishment (2.1-1), prevalence of population with moderate or severe food insecurity (2.1-2).

CES: obesity prevalence for western countries, and malnutrition prevalence for developing countries (160)

15. The proposed SDG indicators are in line with those proposed by the CES Recommendations, even though for high-income countries data on obesity may be included.

D. Theme 4. Health

SDG: No real core indicators.

CES: Life expectancy at birth (185).

16. No actual core indicator of health has been proposed in the SDG list. However, data on life expectancy at birth, as proposed by CES, are available for 185 countries.

E. Theme 5. Labour

SDG: No core indicators

CES: Employment rate (145).

17. Also here, no core indicator has been identified. The employment rate, as proposed by the CES, is available for 145 countries.

F. Theme 6. Education

SDG: Percentage of children who achieve minimum proficiency standards in reading and mathematics at end of primary, lower secondary (4.1-1); completion rate (by type of schooling) (4.1-2); Enrolment ratio's by level of education (4.3-1)

CES: Educational attainment by type of schooling (184)

18. The SDG list consists of a number of important core indicators, which are in line with the suggestion made by CES.

G. Theme 7. Housing

SDG: Percentage of urban population living in slums or informal settlements (11.1-1)

CES: urban population in slums (91)

19. The proposed SDG indicator is the same the one as proposed by CES.

H. Theme 8. Leisure

SDG: not included

CES: only included for developed countries.

20. As leisure can be seen as a relevant aspect of sustainable development for only a very limited number of countries, this theme can be skipped.

I. Theme 9. Physical safety

SDG: Under goal 16 an indicator for homicide and conflict related deaths (16.1-1) is included.

CES: Death by assault/homicide rate (186)

21. The proposed SDG indicator is also included in the CES framework.

J. Theme 10. Land and ecosystems

SDG: Ocean health Index (14.2-2); proportion of fish stocks within biologically sustainable limits (14.4-2); Red list index (15.5-1); living planet index (15.5-2)

CES: Bird index; birth species threatened (214)

22. The proposed SDG indicators cover a much wider range of issues, which should be welcomed.

K. Theme 11. Water

SDG: Percentage of population using safely managed drinking water services (6.1-1); Percentage of population using safely managed sanitation services (6.2-1); Population with a hand washing facility with soap and water in the household (6.2-2)

CES: Water quality index; Water abstractions (93)

23. Also for this theme, the list of SDG indicators addresses a wider range of issues.

L. Theme 12. Air quality

SDG: Population in urban areas exposed to outdoor air pollution levels above World Health Organization guideline values (3.9-1)

CES: urban exposure to particulate matter (173)

24. The SDG proposed indicator is the same as the one selected in the CES framework.

M. Theme 13. Climate

SDG: no core indicator selected.

CES: Greenhouse Gas emissions or carbon dioxide (CO_2) emissions (229)

25. The CO_2 emissions, which are available for 229 countries, can be used as the core indicator.

N. Theme 14. Energy resources

SDG: Renewable energy share in the total final energy consumption (7.2-1)

CES: Energy consumption (187)

26. Energy consumption, and the share of renewable energy in total energy consumption can be used as core indicators.

O. Theme 15. Mineral resources

SDG: not included.

CES: domestic material consumption (200).

27. Data on domestic material consumption, the indicator proposed by CES, are available for 200 countries.

P. Theme 16. Trust

SDG: Proportion of population satisfied with the quality of public services (16.6-2); proportion of the population reporting and perceiving to be discriminated against directly and/or indirectly, and hate crimes (16.b-1).

CES: quality of public sector administration, derived from the World Development Indicators and available for 82 countries.

28. The quality of public services or public administration is a suggested indicator in both the SDG list as in the CES Recommendations. Besides, the SDG list also includes an important indicator on discrimination (indicator in the field of "bridging social capital").

Q. Theme 17. Institutions

SDG: Percentage of people who have experienced a dispute, reporting access to an adequate dispute resolution mechanism (16.3-1); percentage of population and of businesses, who/that paid a bribe to a public official, or were asked for a bribe by these public officials during the last 12 months (16.5-1 and 2)

CES: voter turnout at elections (194)

29. SDG suggestions are much better than the one made in the CES Recommendations, even though measurability of some of the proposed indicators may be questioned. The indicator of voter turnout may be considered as a fall-back option.

R. Themes 18-20 (physical, knowledge and financial capital)

SDG: The proposed SDG indicators do not include capital stock indicators

CES: gross capital formation (156), R&D expenditures (116) and consolidated government debt (84)

30. The proposed SDG indicator list largely ignores capital indicators, which are so important to be informed about the inter-generational aspect of sustainable development. For economic, knowledge and financial capital the CES Recommendations provide information on some capital indicators (the ones for natural capital and human capital are already included in other themes, such as education, energy and climate).